

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/30/2010, has been entered.
2. Claims 1, 5-9, 13-18 are currently pending in the application, wherein claims 9, 13-16 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 1, 5, 6, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thacker (article, Performance of Broiler Chicks Fed Wheat-Based Diets Supplemented with Linpro) as evidenced by Buser et al., (article, Effects of Extrusion Temperature and Dwell Time on Aflatoxin Levels in Cottonseed) in further view of Hodgson et al., USPN 4824683.**

5. Claims 1, 5, 17, 18 relate to a method of preparing an animal feed component. Thacker teaches chick feed that is supplemented with an extruded whole flax seed [considered intact oil seeds] and peas product, 50:50 full-fat flax seed and field peas [considered 50% pulse crop and 50% oil seed]. The product increases the incorporation of omega-3-fatty acids (abstract). The ground peas and flax seed were extruded at a temperature of 125-130°C [considered 257 to 266°F] using an Instapro Extruder (see Materials and Methods).
6. Buser teaches the Instapro Extruder reaches a maximum pressure of 2750kPa [considered about 398 psi] (see Materials and Methods). Therefore, it is inherently anticipated that the extrusion disclosed by Thatcher is known to achieve the claimed pressured as indicated by Buser.
7. The temperature and pressures taught is considered to achieve gelatinizing of the mixture.
8. Neither Thacker nor Buser teaches half of the pulse crop has a diameter of 5 microns or less. Hodgson teaches the preparation of bread using pea bran that is ground into a size similar to flour, the average particle size of about 5 to 25 microns in diameter, and preferably below 10 microns (column 4, lines 44-52). The pre-gelatinized product is commercially available (col. 4, lines 55-56). Since both Thacker and Hodgson teach ground peas in food, it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized a commercially available ground pea product such as the ground pea that has an average size about 5 microns

as taught by Hodgson, this ground pea would have been easily dispersed with the flax seeds to make the chick feed product of Thatcher.

9. Claim 6 relates to a method of preparing an animal feed component. Thacker does not teach the temperature of about 265F to about 268F. It would have been obvious to one having ordinary skill in the art, at the time of the invention, to have selected about 265F to 266F because of the overlapping range taught by Thacker.

10. **Claims 1, 5-8, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glinksky USPA 20040037918 in view of Nahm USPN 4310558 in further view of Hodgson et al., USPN 4824683 in further view of Thacker (article, Performance of Broiler Chicks Fed Wheat-Based Diets Supplemented with Linpro).**

11. Claims 1, 5-8, 17, 18 relates to a method of preparing an animal feed component. Glinksky teaches an extruded bird food product made from a mixture of grains, seeds, nuts and fresh fruits and vegetables (abstract). The bird food ingredients are mixed into dough, extruded and formed into multi-colored, multi-shaped pellets [0014]. The ingredients include vegetable such as flax seed, green split peas, yellow split peas, trappers peas; seeds/nuts include shelled sunflower seeds (considered intact oilseed) [0019].

12. Glinksky does not teach the extrusion parameters. Nahm teaches an extruded fiber mixture pet food for a dry pet that has a tough, pliable, fibrous texture (abstract). The pet food comprised a green component such as peas (column 2, lines 61-62). In one embodiment ground peas are used (see Table IIa). The fibrous simulating pieces

include soybeans (column 2, lines 65-67). Typical mechanical processes of the ingredients are at about 212°F to about 400°F and about 15 psig to about 300 psig to convert the mass into a flowable substance (column 5, lines 61-65). Since both teach a dried animal feed, it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized the extrusion conditions of Nahm to effectively mix the bird feed of Glinsky into a flowable product.

13. Neither Glinsky nor Nahm explicitly teach about 200 psi to about 400 psi. Nahm teaches the typical mechanical processes of the ingredients are at about 212°F to about 400°F and about 15 psig to about 300 psig to convert the mass into a flowable substance (column 5, lines 61-65). It would have been obvious to one having ordinary skill in the art, at the time of the invention, to have selected about 200 psi to about 400 psi because of the overlapping range of Nahm.

14. Neither Glinsky nor Nahm explicitly teach temperature of 255F to 275F, 265F to about 268F, 300F to about 325F, or 325F to 335F. Nahm teaches the typical mechanical processes of the ingredients are at about 212°F to about 400°F and about 15 psig to about 300 psig to convert the mass into a flowable substance (column 5, lines 61-65). It would have been obvious to one having ordinary skill in the art, at the time of the invention, to have selected about 255F to 275F, 265F to about 268F, 300F to about 325F, or 325F to 335F because of the overlapping range of Nahm.

15. Neither Glinsky nor Nahm teach half of the pulse crop has a diameter of 5 microns or less. Hodgson teaches the preparation of bread using pea bran that is ground into a size similar to flour, the average particle size of about 5 to 25 microns in

diameter, and preferably below 10 microns (column 4, lines 44-52). The pre-gelatinized product is commercially available (col. 4, lines 55-56). Since both Nahm and Hodgson teach ground peas in food, it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized a commercially available ground pea product such as the ground pea that has an average size about 5 microns as taught by Hodgson, this ground pea would have been easily dispersed with the ingredient of the bird feed of Glinsky.

16. Neither Glinsky nor Nahm teach the mixture being 15-55% pulse crop and 45-85% oil seed, and intact oil seeds. Thacker teaches chick feed that is supplemented with an extruded whole flax seed [considered intact oil seeds] and peas product, 50:50 full-flat flax seed and field peas [considered 50% pulse crop and 50% oil seed]. The product increases the incorporation of omega-3-fatty acids (abstract). The ground peas and flax seed were extruded at a temperature of 125-130 °C [considered 257 to 260 °F] (see Materials and Methods). The extruded product may provide poultry producers a method to increase omega-3-fatty acid content of poultry meat catering to the need of a health conscious consumer (Page 624). It would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized the amounts of whole flax seed and pea taught by Thacker to increase the omega-3-fatty acids in the extruded bird food product of Glinsky.

17. **Claims 1, 5-8, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen CA 02319978 in further view of Hodgson et al., USPN 4824683.**

18. Claims 1, 5-8, 17 relates to a method of preparing an animal feed component. Christensen teaches producing pelletizable animal feed having high nutrient value comprising oleaginous seed material, for example, canola and legume material, such as pea, and extrusion there of (abstract). A first mixture is made by mixing legume material and oleaginous seed material and then processed by extrusion. The extruded mixture is added to alfalfa and pelletized to produce animal feed (page 6, lines 6-12). The oleaginous seed material preferred is unrefined canola seed material, whole canola seed (page 10, lines 1-3). In one embodiment, the first mixture has 47.5 % whole canola seed and 47.5 % whole pea seed meal and process by standard extrusion methods to form a high-fat meal (page 14, lines 6-8). Typical extruding temperature is 265-268 °F (page 10, lines 14-15).
19. Christensen does not teach half of the pulse crop has a diameter of 5 microns or less. Hodgson teaches the preparation of bread using pea bran that is ground into a size similar to flour, the average particle size of about 5 to 25 microns in diameter, and preferably below 10 microns (column 4, lines 44-52). The pre-gelatinized product is commercially available (col. 4, lines 55-56). Since both Christensen and Hodgson teach peas in food, it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized a commercially available ground pea product such as the ground pea that has an average size about 5 microns as taught by Hodgson, this ground pea would have been easily dispersed with the canola seeds to make the pelletizable animal feed of Christensen.

20. Christensen does not teach the extrusion pressure and gelatinizing. Since Christensen teaches standard extrusion methods, it would have been obvious to one having ordinary skill in the art at the time of the invention to have operated the machine by selected a pressure between about 200 psi to about 400 psi that would have effectively gelatinized the mixture during extrusion processing.

Response to Arguments

21. The affidavit or declaration under 37 CFR 1.132 filed 12/30/2010 is sufficient to overcome the rejection of claims 1, 5, 17, 18 based upon the reference to Thacker with regards to the pulse crop diameter which has been overcome.

22. Applicant's arguments, see Remarks pages 1-2, filed 12/30/2010, with respect to 102(b) rejections anticipated by Thacker have been fully considered and are persuasive. The rejections of claims 1, 5, 17, 18 have been withdrawn.

23. Applicant's arguments, see Remarks page 4, filed 12/30/2010, with respect to 103(a) rejections anticipated by Vanvolsem have been fully considered and are persuasive. The rejections of claims 1, 5-8, 17, 18 have been withdrawn.

24. Applicant's arguments filed 12/30/2010 with respect to Glinsky, Nahm, Hodgson and Thacker have been fully considered but they are not persuasive. Applicant argues that Glinsky does not teach intact oils seeds mixed with finely ground pulse crop and extruded. Nahm does not teach the size of the ground peas. Hodgson teach the pea bran is pre-gelatinized prior to use in the bread product. There is no incentive to combine Glinsky, Nahm and Hodgson (see Remarks pages 3-4).

25. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

26. In response to applicant's arguments to the combination of Glinsky, Nahm and Hodgson, the utilization of intact oil seeds is taught by Glinsky, who teaches ingredients such as shelled sunflower seeds [0019]. Further Glinsky teaches other grains and seed/nuts but does not teach grinding, therefore Glinsky does not exclude intact oil seeds or emphasize deleterious results of using intact oil seeds. The Examiner agrees that Glinsky does not teach a ground pulse crop, however, the ingredients of grains and seeds/nuts are taught and Glinsky does not exclude ground pulse crops or emphasize deleterious results of using grounds pulse crops.

27. Neither Glinsky nor Nahm teach half of the pulse crop has a diameter of 5 microns or less. Since Glinsky teaches ingredients such as green split peas and yellow split peas, and trapper peas, and both Nahm and Hodgson teach ground peas in food, it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized a commercially available ground pea product such as the ground pea that has an average size about 5 microns as taught by Hodgson, this ground pea would have been easily dispersed with the ingredients of the bird feed of Glinsky.

28. The combination of Hodgson is based on common knowledge in the art, since Hodgson teaches ground pea that has an average size about 5 microns. This ground pea is then pre-gelatinized. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized the ground particle size taught by Hodgson. Additionally, Hodgson teaches a commercially available ground pea product that is pre-gelatinized, that would have been easily accessible and incorporated as the pea product into the bird feed of Glinsky.

Conclusion

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeeda Latham whose telephone number is (571)270-1154. The examiner can normally be reached on Monday to Thursday 8:00AM - 5:00PM EST.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Humera Sheikh can be reached on 571-272-0604. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Humera N. Sheikh/
Supervisory Patent Examiner, Art Unit 1789

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Examiner, Art Unit 1789